Amendments to the Claims

Please amend the claims as follows:

Claims 1-26 (Canceled).

Claim 27 (Currently Amended): A method of adjusting a frequency of a dot clock signal for a video signal, said method comprising:

(a) generating a first dot clock signal based on a horizontal synchronizing signal of said video signal and a first factor, the first factor representing a ratio of a frequency of the first dot clock signal to a frequency of the horizontal synchronizing signal;

(b) sampling said video signal by said first dot clock signal to obtain image data;

(c) obtaining a number of beats ~~caused by a difference between a desirable frequency and the actual frequency of the first dot clock signal~~ over one line of said image data, the beats being a low frequency component of the image data over the one line of the image data wherein the frequency of the beats is determined by a difference between a desirable frequency and the actual frequency of the first dot clock signal;

(d) correcting said first factor with said number of beats, thereby obtaining a second factor; and

(e) generating a second dot clock signal based on said horizontal synchronizing signal and said second factor.

Claims 28-45 (Canceled).

Claim 46 (Currently Amended): An apparatus for adjusting a frequency of a dot clock signal for a video signal, comprising:

means for generating a first dot clock signal based on a horizontal synchronizing signal of said video signal and a first factor , the first factor representing a ratio of a frequency of the first dot clock signal to a frequency of the horizontal synchronizing signal;

means for sampling said video signal by said first dot clock signal to obtain image data;

means for obtaining a number of beats ~~caused by a difference between a desirable frequency and the actual frequency of the first dot clock signal~~ over one line of said image data, the beats being a low frequency component of the image data over the one line of the image data wherein the frequency of the beats is determined by a difference between a desirable frequency and the actual frequency of the first dot clock signal;

means for correcting said first factor with said number of beats, thereby obtaining a second factor; and

means for setting said second factor in said means for generating and thereby enabling said means for generating to generate a second dot clock signal based on said horizontal synchronizing signal and said second factor.

Claims 47-68 (Canceled).

Claim 69 (Previously Presented) A method of adjusting frequency of a dot clock signal for a video signal, said method comprising the steps of:

    (a)   multiplying a frequency of a horizontal synchronizing signal of said video signal by a first factor to generate a first dot clock signal;

    (b)   sampling said video signal by said first dot clock signal to obtain image data;

    (c)   obtaining a number of beats over one line of said image data;

(d)   correcting said first factor with said number of beats, thereby obtaining a

desirable second factor; and

(e)   multiplying the frequency of said horizontal synchronizing signal by said

second factor to generate a second dot clock signal that can be used to sample image data

without beats,

wherein said step (b) comprises the step of obtaining first image data and second

image data by tow kinds of said first dot clock signal having a first phase and a second phase

that are different from each other,

said step (c) comprising the step of carrying out a correlation analysis on said first

image data and said second image data to determine said number of beats,

wherein said step of carrying out correlation analysis comprises that steps of:

(i)   allocating a first value to pixel positions having a relatively large

difference between said first image data and said second image data while allocating a

second value to pixel positions having a relatively small difference between said first

image data and said second image data, thereby generating binary data consisting of

said first value and said second value; and

(ii)   processing said binary data to determine said number of beats, wherein

said step (i) comprises the step of:

generating at least one of first binary data, second binary data, and

third binary data, wherein:

said first binary data is to be generated by allocating said first

value to pixel positions having a relatively large difference between

said first image data and forward-shifted second image data obtained

by shifting a pixel position of said second image data forward by one

pixel and by allocating said second value to pixel positions having a

relatively small difference between said first image data and said forward-shifted second image data,

said second binary data is to be generated by allocating said first value to pixel positions having a relatively large difference between said first image data and said second image data and allocating said second value to pixel positions having a relatively small difference between said first image data and said second image data, and

said third binary data is to be generated by allocating said first value to pixel positions having a relatively large difference between said first image data and backward-shifted second image data obtained by shifting a pixel position of said second image data backward by one pixel, and by allocating said second value to pixel positions having a relatively small difference between said first image data and said backward-shifted second image data, and

said step (ii) comprises the steps of:

determining said number of beats using at least one of said first through third binary data;

providing a first pair of binary data including said first and second binary data and a second pair binary data including said second and third binary data;

executing a toggle operation, with respect to each of said first and second pairs of binary data, using a rise of one binary data of each par and a rise of the other of each pair to generate two toggled binary data for said first and second pairs of binary data;

selecting one of said tow toggled binary data which has an

average closer to 0.5; and

measuring a number of pulses included in one line of said

selected toggled binary data, thereby determining said number of beats,

wherein said step of measuring a number of pulses comprises

the steps of:

deleting an interval between a rise and a fall of said selected

binary data that is less than a predetermined value, thereby generating

modified binary data; and

measuring a number of pulses included in one line of said

modified binary data, thereby determining said number of beats.